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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,694	09/25/2003	Jae-Su Song	3364P135	9271

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EXAMINER

MEHRPOUR, NAGHMEH

ART UNIT	PAPER NUMBER
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2686

DATE MAILED: 02/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/672,694

Applicant(s)

SONG ET AL.

Examiner

Naghmeh Mehrpour

Art Unit

2686

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 5, are rejected under 35 U.S.C. 102(e) as being anticipated by Choi (US Publication 2004/0198383 A1)

Regarding claim 1, Choi teaches a handover method for mobility of a terminal in a mobile communication system, comprising:

- (a) performing IP (Internet protocol) acquisition through an IP registration process according to a mobile IP when a terminal in an idle state moves to a new cell (0045, 0058); and
- (b) transmitting traffic to a new moving AS (access station) from a previous AS without performing an IP modification and registration process when a terminal in an active state moves to a new cell (0045, 0077).

Regarding claim 5, Choi teaches a method of claim 1, wherein the terminal operates according to a procedure of the mobile IP when the terminal is in the idle state, and it operates according to a mobile communication network procedure when it is in the active state (0045, 0058, 0077).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 2, is rejected under 35 U.S.C. 103(a) as being unpatentable over Choi (US Publication 2004/0198383 A1) in view of Ahmavaara (US Publication 20040068571).

Regarding claim 2, Choi fails to teach a method of claim 1, wherein comprises:

receiving a channel state measurement report message from the terminal; a control AS determining a handover to set a radio link at a drift AS, and reconfigure an RLC (radio link control) layer at a serving AS;

transmitting an active set update message to the terminal; and starting traffic access to the drift AS. However, Ahmavaara teaches teach a method of claim 1, wherein comprises:

receiving a channel state measurement report message from the terminal; a control AS determining a handover to set a radio link at a drift AS, and reconfigure an RLC (radio link control) layer at a serving AS (0028, 0032, 0041);

transmitting an active set update message to the terminal; and starting traffic access to the drift AS (0041, 0028, 0032). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine the above teaching of Ahmavaara with Choi, in order for the service node can be connected to an SGSN, MSC or an other second access network node by a standard lu interface and/or to other service or switching nodes by an lur signaling interface for supporting seamless inter service node and inter access system handovers.

5. Claim 3, is rejected under 35 U.S.C. 103(a) as being unpatentable over Choi (US Publication 2004/0198383 A1) in view of Bims (US Patent 6,862,448 B1).

Regarding claim 3, Choi teaches a method of claim 1, wherein when the terminal is in the active state in. Choi does not specifically mention that data traffic transmitted through the radio link following the IP/RLC/MAC/physical layer preset in the serving AS is switched to the MAC/physical layer of the drift AS through the drift AS. However, Bims teaches data traffic transmitted through the radio link following the IP/RLC/MAC/physical layer preset in the serving AS is switched to the MAC/physical layer of the drift AS through the drift AS (col 8 lines 64-67, col 9 lines 1-7). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made

to combine the above teaching of Bims with Choi, in order to provide feasibility and mobility between 802.11 cells

6. Claim 4, is rejected under 35 U.S.C. 103(a) as being unpatentable over Choi (US Publication 2004/0198383 A1) in view of Bims (US Patent 6,862,448 B1) in further view of Ahmavaara (US Publication 20040068571).

Regarding claim 4, Choi modified by Bim fails to teach a method of claim 3, wherein when the terminal is in the active state, the data lost while generating the link moving to the terminal from the serving AS through the drift AS at the time of generation of handover are retransmitted using the retransmission function in the RLC layer when the handover is finished. However, Ahmavaara teaches method wherein when the data lost while generating the link moving to the terminal from the serving AS through the drift AS at the time of generation of handover are retransmitted using the retransmission function in the RLC layer when the handover is finished (110, 141, 143, 153, 170, 171). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine the above teaching of Ahmavaara with Choi modified by Bim, in order for the service node can be connected to an SGSN, MSC or an other second access network node by a standard lu interface and/or to other service or switching nodes by an lur signaling interface for supporting seamless inter service node and inter access system handovers.

Response to Arguments

7. Applicant's arguments filed 10/28/05 have been fully considered but they are not persuasive.

In response to the applicant's argument that *Choi teaches registration with one or both of a paging foreign agent and a controlling foreign agent, and neither of these do are IP registration process, and no IP acquisition is performed, examiner disagree with applicant's.*

Choi teaches in FIG. 4 shows call flow when paging registration is performed. A paging area (PA) identified by IP addresses of its **controlling and paging foreign agents** (base station controller, in cellular system) (0042, 0052). The paging area identifications may be distributed by agent advertisements together with the paging area identification extension shown in FIG. 3. Therefore, mobile nodes receive the agent advertisements to detect their paging areas. Referring to FIG. 4, a home agent sends packets, which will be sent to mobile nodes in idle mode to a controlling foreign agent. Subsequently, the controlling foreign agent sends paging requests to all paging foreign agents in its regional area. However, all the paging foreign agents do not relay the paging requests to their mobile nodes. Instead, before relaying the paging requests to their mobile nodes, the paging foreign agents search their visitor lists to find out the mobile nodes in idle mode. Only the paging foreign agent having the home address of the mobile node sends the paging request to its paging area. When the mobile node finds its home address in the paging request, the mobile node sends a paging reply to its paging foreign agent (**No IP acquisition process in the Idle mode**). And, the mobile node changes its mode to active mode

and starts its active timer. When the paging foreign agent receives the paging reply from the mobile node, the paging foreign agent sends a regional registration request to its controlling foreign agent. The controlling foreign agent sends the regional registration reply back to its paging foreign agent, and the paging foreign agent sends a paging reply to its controlling foreign agent **(without performing IP modification) (0056)**. Choi further teaches in FIG. 7 a call flow of local registration. The local registration procedures are performed when a mobile node in idle mode moves away from one paging area to another paging area in a specific regional area. First, the mobile node sends a local registration request to a paging foreign agent in its paging area, and the paging foreign agent sends a local registration reply to the mobile node. Thus, when the mobile node in idle mode moves between paging areas, the registration procedures are simplified since the mobile node registers at its paging foreign agent only not controller foreign agent (0066).

In response to applicant's argument that the Choi fails to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., there is no switching between IP procedure and mobile communication network protocol) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to applicant's argument that Choi fails to teach a method comprises: receiving a channel state measurement report message from the terminal;

a control AS determining a handover to set a radio link at a drift AS, and reconfigure an RLC (radio link control) layer at a serving AS; transmitting an active set update message to the terminal; and starting traffic access to the drift AS. However, Ahmavaara teaches a method wherein comprises: receiving a channel state measurement report message from the terminal; a control AS determining a handover to set a radio link at a drift AS, and reconfigure an RLC (radio link control) layer at a serving AS (0028, 0032, 0041); transmitting an active set update message to the terminal; and starting traffic access to the drift AS (0041, 0028, 0032). Therefore, by combining teaching of Ahmavaara with Choi, connecting to an SGSN, MSC or an other second access network node by a standard lu interface and/or to other service or switching nodes by an lur signaling interface for supporting seamless inter service node and inter access system handovers. The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

In response to the applicant's argument regarding claims 3-4, that the examiner does not indicate, and applicant's have not found any portion of Bims that supplies Choi's deficiencies with respect with claim 1. and there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some

teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, regarding claim 3, Choi teaches a method of claim 1, wherein when the terminal is in the active state (0069). Choi does not specifically mention that data traffic transmitted through the radio link following the IP/RLC/MAC/physical layer preset in the serving AS is switched to the MAC/physical layer of the drift AS through the drift AS. However, Bims teaches data traffic transmitted through the radio link following the IP/RLC/MAC/physical layer preset in the serving AS is switched to the MAC/physical layer of the drift AS through the drift AS (col 8 lines 64-67, col 9 lines 1-7). Therefore, by combining teaching of Bims with Choi, providing feasibility and ability between 802.11 cells, and regarding to claim 4, please see the above rejection.

Conclusion

8. Any responses to this action should be mailed to:

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naghmeh Mehrpour whose telephone number is 571-272-7913. The examiner can normally be reached on 8:00- 6:00.

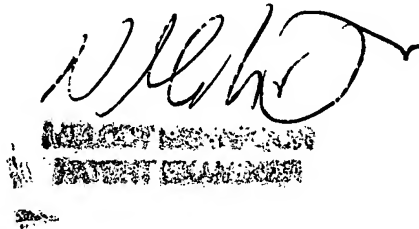
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold be reached (571) 272-7905.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NM

February 6, 2006

A handwritten signature in black ink is positioned above a rectangular official stamp. The stamp contains the text "PATENT EXAMINER" in a bold, sans-serif font, with "UNIT 2686" printed below it. The signature appears to be "N. H. D." or similar, written in a cursive style.